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CONTENTS

	Page
Editorial : G. W. Baker...	831
DISEASE CONTROL AND SANITATION PROGRAMME FOR MUSHROOM NURSERIES : Dr. J. W. Sinden	832
1956 INTERNATIONAL CONFERENCE	841
FOURTH ANNUAL MUSHROOM INDUSTRY EXHIBITION ...	842
Presentation to Capt. and Mrs. Lawrence	842
Mushrooms a Health Food	843
TRADE EXHIBITS...	843
Annual Luncheon Record	845
ANNUAL MEETING : PUBLICITY DISCUSSION	847
Some Criticisms Inevitable	856
Competition Results	857
EXHIBITION PICTURE PARADE	858
PINHEADS: Stanley Middlebrook	864
NEW CHAIRMAN AND VICE-CHAIRMAN	866
I HAVE BEEN THINKING : Dr. R. L. Edwards	868

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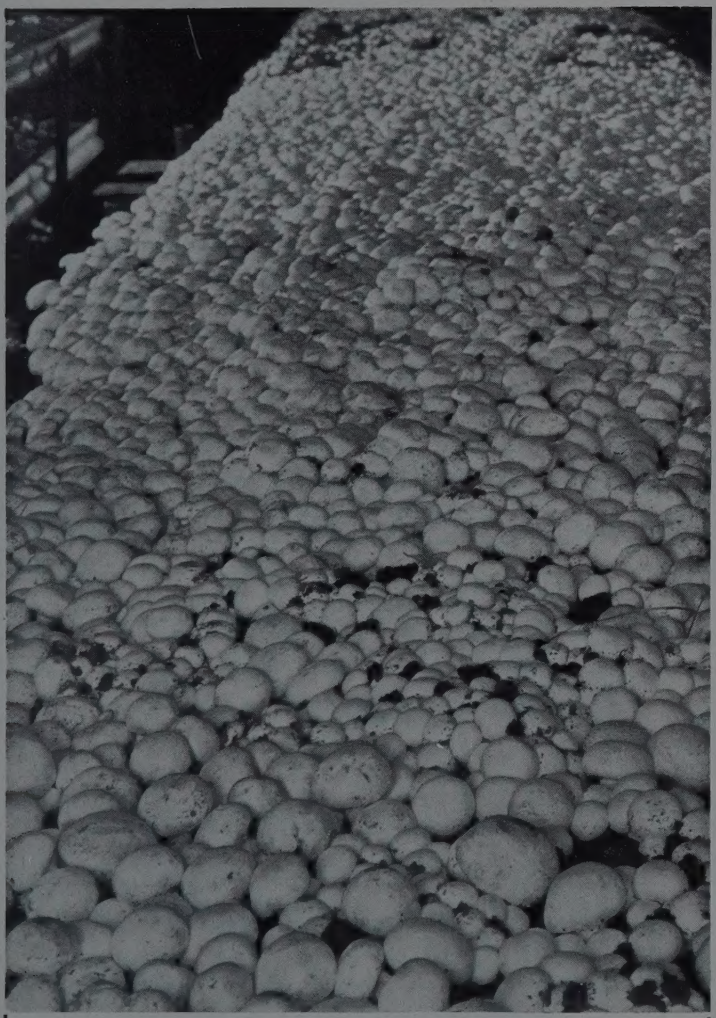

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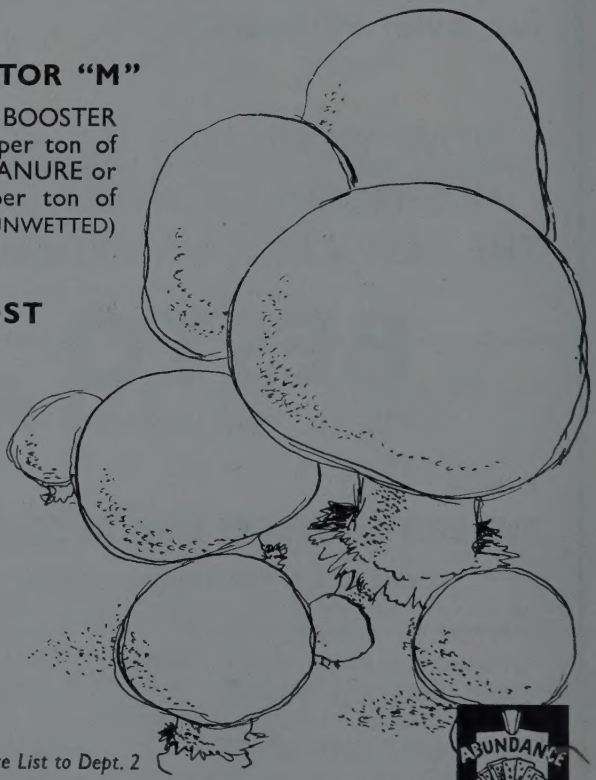

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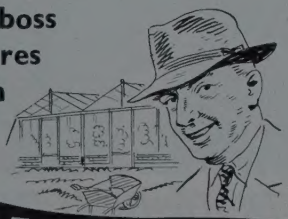

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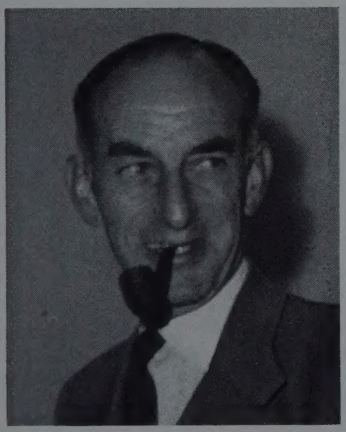
EDITORIAL



Having been elected Chairman by the Executive Committee, my first pleasant duty is to publicly thank Capt. Lawrence for presiding over us for the past two years. (The MGA rules only allow a Member to be Chairman for a maximum of two consecutive years.) The period so covered saw the MGA extend and increase its activities.

Capt. Lawrence stated in the Bulletin following his election in October, 1953, that he " got a lot out of the Association by being a member" and that in accepting the Chairmanship he had the opportunity to put something back and would endeavour to do so. Only a few of us really know how much he has achieved and on behalf of the members I sincerely thank him and Mrs. Lawrence who has so graciously backed up all the good work of her highly esteemed husband.

For my part I am grateful for the honour accorded me as your new Chairman and am deeply conscious that, in following Capt. Lawrence, I have a difficult task. As many of you will know I have for many years been keenly interested in the MGA, being firmly convinced that we mushroom growers have peculiar problems of our own outside the general run of the horticultural industry. That being so it is most important that the MGA should continue from strength to strength and I will certainly see that the affairs of the industry are closely watched and that no effort is spared to guard the welfare of the growers and to expand the authority of the MGA.

G. W. BAKER

DISEASE CONTROL AND SANITATION PROGRAMME FOR MUSHROOM NURSERIES

Dr. J. W. Sinden causes a stir at Brighton

Dr. J. W. Sinden, world authority on mushroom growing and mushroom diseases, caused a considerable stir when he lectured at the Fourth Annual Mushroom Industry Exhibition at Brighton, on Wednesday, 5th October.

Dr. Sinden's lecture on " Disease Control and Sanitation Programme for Mushroom Nurseries " had originally been intended for Thursday morning, 6th October, but the other lecturer, Dr. E. Hauser who, like Dr. Sinden, comes from Gossau-Zurich, Switzerland, was unable, because of indisposition, to arrive at Brighton in time for her lecture on Wednesday and that given by Dr. Sinden was advanced by a day.

Dr. Sinden, as *The Grower* aptly put it, " must have shaken up more widely held ideas in an hour and a half than many people do in a lifetime " when, outlining some of the standard precautions against disease which are widely and regularly practised by the great majority of British mushroom growers, Dr. Sinden asked the question: " How many of these would I advocate as a regular practice in the nursery?" His reply: " None—exactly none " took the growers completely by surprise.

Well over 300 growers crowded into the theatre adjoining the Corn Exchange (where the annual Exhibition took place) and heard Capt. G. P. Lawrence, Chairman of the MGA, introduce Dr. Sinden.

In his lecture Dr. Sinden said: We can classify the cause of diseases and of the organisms associated with the mushroom at all stages, for good or ill in many ways, by kind of organism, fungus, bacterium, mite, eelworm, etc., or by symptoms on the mushroom such as spot, mildew, rot, rose-comb, or by relation to the mushroom such as parasite, competitor, antagonist, irritant. Perhaps we can come to understand our disease problems better by examining the causes by several of these categories and perhaps the least rewarding is by separating the kinds of organisms. Of course, we must have a name for the cause of the trouble and to the scientist this name is essential for identification. You as growers are scarcely interested in the fact that the fungus known as *Pseudobalsamia microspora* causing the truffle disease has recently been found to be living under false pretences and now has been transferred to the native black section across the road and must hence forward be known under another name. To you it is a dangerous organism to have around a mushroom nursery by any name, and you want to know how to keep it out or get rid of it.

I find as a mushroom grower and investigator that the category to which I most frequently refer is the relation of the cause to the mushroom growing in the bed, no matter what kind of plant or animal the cause is or even if it is non-living. We have thought much about these

relationships and have advanced our concepts much over what we earlier considered an adequate separation of the causes of the diseases and problems of mushroom growing.

The main separation which is familiar to you is into weed-organisms, parasites, and non-living irritants. The term weed is perhaps a misnomer used to cover all the organisms associated with the mushroom in the bed but not parasitic on it. Actually, however, it gives a good start for the discussion of the biological complex of the compost, when further divided into indicators and competitors, benign and antagonistic. The well grown mushroom bed during the early breaks is almost as pure a growth of mushrooms as a good corn field is a pure growth of corn. From many mushroom composts, I have made without any special precautions pure cultures of mushroom mycelium with the same ease and assurance one would have on a good farm of pulling up a handful of wheat stalks at random without finding any weeds mixed in.

We must, therefore, allow that a bed having an obvious mixture of other organisms than mushroom is abnormal and that in few cases can we expect as good a crop as when such " weeds " are not present. Also we must expect that these " weeds " will not be confined to the moulds but may include many small animals as well. We can call them all " foreign organisms " and proceed to find out why they are there and what effect they are having on our crop.

Unfortunately this study is long, arduous and painstaking and is still in its infancy. We are finding surprising relationships. The more we learn, the more fascinating the study becomes and the more we learn about making compost especially suited to mushroom culture.

Some of these organisms are universally present all over the world. They cannot be excluded or kept out of the compost as their spores are always present, ready to recontaminate a compost free of them. Once the heat of the " sweating out " is completed they return to grow if the compost is suited to their nutrition.

Luckily we have the big " if " and that usually keeps the intruders out. Spores fall on the newly spawned compost; nematodes crawl out of their hiding places rejuvenated by their turkish bath; mites crawl out of the insulation and drop onto the waiting bed. We cannot keep them all away. But usually nothing detrimental happens. These organisms are not omnivorous; they are special feeders, luckily for us; and our best way to combat them is to starve them to death by not giving them their special diet.

If we only knew more of what their special diet is! We are learning and in the coming years I dare say we shall find ways to avoid many of the much written about foreign organisms in our compost.

An example of this study concerns the little reddish mite, *Pygmaeophorus americanus* which tends to pile up on mushrooms and bed surfaces. Most of us are well acquainted with the little pest and he threw American growers into a panic last year when one of the soup makers refused shipments having any of him around. He has not been known particularly as a mushroom eater but that is about all that has or has not been known about him.

Then someone in America came up with the information that he is definitely a fungus eater. Walter Gerner and Edith Sigel of the research staff at Butler County Mushroom Farm, West Winfield, Pa., isolated all the moulds they could find in some intentionally poorly pasteurized (over heated) compost. Among them were white flour mould, *Chaetomium* or olive green mould and eight or ten others. They grew these in pure culture and pastured the pygmy mite on them.

Did the mites go for just any mould offered them? They did not. There was just one of the whole lot that the mites would touch and this mould was an inconspicuous one which had never received attention from anyone studying compost. The mushroom mycelium they would not eat. Armed with this information the two researchers went digging about in the beds and wherever they found the mites, there, sure enough, was the unnoticed mould or remnants of it.

The mites we see on the beds are hungry little outcasts that have run out of food and are waiting for a lift by air or pickers to fresh pastures.

Now the control of the pygmy mites takes on a totally new aspect. We must eliminate the mould it feeds on and the mites will disappear. The mould also requires a special diet from the compost and luckily most beds are not suited to its growth.

This is only an example of the kind of information we must seek if we hope to keep the indicator weed-organisms in check. As we learn more we find that the great majority of these invaders we consider as weeds are only present under very special circumstances.

A few, unfortunately, do grow best in the compost best suited to mushroom growing. The control of such weeds presents some of the knottiest problems in mushroom growing. Among them are the misnamed Red *Geotrichum*, yellow moulds which Miss Gandy is studying and truffle. I shall return to them again in a discussion of their control, but even with some of these we may eventually find specific conditions of the environment which limit their development.

The parasitic pathogenes are an altogether different lot. They are tied to the mushroom and all other conditions of compost and environment become secondary. To understand them we must study their relation to the mushroom as a plant. Some parasites confine their attack to the above ground mushroom fruits, some grow or feed only on the mycelium in the compost and soil. A few develop on both parts of the plant. One or two may live as well on other fungi related to the mushroom.

The most important character is their parasitism. They may exist apart as dormant cells, spores, eggs, cysts, etc., but even these dormant stages came originally from growth on mushrooms. Unchecked they can multiply endlessly in the nursery until they have completely ruined the crop. In this category of parasites we find the familiar *Mycogone*, *Verticilliums*, bacteria of pitting and blotch, *Dactylium*, *Ditylenchus nematodes*, several species of flies and mites. Several other organisms are less well-known but no less parasitic.

Probably the causes of Mummy and La France disease fall into this category.

So much for a quick survey of the organisms with which we are dealing. The one most significant and remaining character which I would like to emphasize over and over again is their specificity and that control of them becomes specific. While general cleanliness and neatness are basic in any nursery or glasshouse enterprise or even on any farm they only tend to make the problem of disease control easier and in themselves are not control measures.

The grower who relies on cleanliness for control is more vulnerable to an attack of disease in his beds than he who devotes his control programme to the specific interception and destruction of the organisms causing the diseases even though this latter grower may not be the paragon of neatness.

There is too much emphasis on sanitation in the literature about mushroom growing, too little on the individuality of these organisms which cause us continuous headaches and apprehension.

During the years when I was visiting many mushroom nurseries in America I used to classify them mentally in three categories of cleanliness. At the top, were those I could visit in my best travelling clothes without changing or even protecting my shoes. In the middle were those where I had to wear a pair of rubbers before I ventured into the premises; and finally there were those where I had to wear, in addition to rubbers, a suit of overalls.

When I had a call to make I finally learned to prepare myself for the conditions I knew I should find. They seldom changed through the years or the seasons. But the disease problems did. All of them had diseases and I never could correlate the category of neatness with the outbreaks of disease.

Sanitation can consist of many things. Let me name a few: Immediate hauling away of all spent compost; washing and disinfecting all trays or bed boards; spraying all inside surfaces with disinfectant between crops; fumigating the rooms between crops or at peak heat; spraying all outside areas, roads and the compost yard with disinfectant; having pans of disinfectant for the workmen to wet the soles of their shoes with on entering and leaving rooms.

How many of these would I advocate as regular practice in the nursery? Exactly none. They cost a lot of time and money and all they accomplish is to give the grower a false sense of security. They substitute for the attention to detail, for the constant vigilance, for the consistent application of the measures necessary to real control of disease. Do not think I advocate carelessness. Quite the contrary. I am pleading for care, real care, the kind which is directed at the roots of the problems.

If you do not know your problem you cannot solve it. Where are the answers to be found? Sometimes in the books on mushrooms buried among the recommendations for general sanitation. Sometimes in the information of the experts who visit your nurseries. Sometimes in

your own close observation of the specific problem you are faced with. And again I say specific.

What should the grower do? Be on guard constantly for the appearances of diseases. Teach the workers to tell you about any unusual condition in the beds at any time. Encourage them, even give them a reward, for information leading to the arrest of the criminals. The main point is to recognize the presence of a disease early.

In most cases the disease enters the nursery unobtrusively as a small infection maybe of one mushroom, and is widely established before the grower is aware that he has a problem. Since it is specific, perhaps coming from an infected wild mushroom growing in the next field, it rapidly increases under the concentrated conditions of a nursery until the whole place is involved before effective control measures are started.

Then the fight can be long and costly. What diseases or weeds would I expect to enter thus, gradually increasing from an insignificant minor infection?

Here are some, and remember that these can come also as massive invasions but from my observations usually do not. Red *Geotrichum*, *Myceliophthora* and related yellow moulds, Truffle, Mummy, La France disease, *Dactylium* mildew, *Ditylenchus* nematodes, Cecid larvae, *Tiroglyphid* mites. The list is not complete and the grower must not think that these are all he should watch for. In the past ten years I have seen four new diseases appear and in each case it was well established before the grower was even aware that his beds were infected.

Do not wait for an expert to diagnose such a disease. Do not wait to see whether it will spread. Get rid of it. Treat it with a chemical disinfectant, with steam or any killing agent you can find, but get rid of it.

Know the source of diseases. Probably the least likely source of disease is the compost pile. One large grower in America who is preparing to build a new plant to grow one and a half million pounds of mushrooms a year has his plans all made to isolate his compost area a quarter to a half mile from his growing plant.

He is handicapping his whole operation economically by this separation and his only reason is fear that the diseases in the compost will enter his growing rooms. There are no diseases in the compost. Even the flies which eat the mushrooms do not breed in the manure pile though many growers mistake the mushroom flies for very similar looking manure flies. Forget the compost pile in your vigilance. Look out for the real sources of disease.

I should rate casing soil at the top among the purely outside harbourers of our disease and weed organisms. Luckily you in England are rapidly diminishing this danger by turning to peat or peat and chalk mixtures for casing. Of the six major disease problems at the big Butler County Mushroom Farm mine, five of them probably first came into the mine with the casing soil.

Despite the inconvenience and cost I should make soil pasteuriza-

tion a must on any mushroom nursery where I am giving advice. Unprotected soil even after treatment or peat and chalk present a real and continuing hazard. We have got by at Butler County Mushroom Farm, Pennsylvania, without soil treatment for 17 years but we have five diseases established there which need never have appeared if from the first only pasteurized soil had been used.

Probably the other single greatest hazard is the air. About air borne infections we can do little to protect ourselves. The cost of filtering all incoming fresh air is too high. *Dactylium* mildew is a prime example of air borne infection and one of the easiest to control if the grower watches for the infection and eradicates it early.

Not a year goes by but what we have several incipient infections of *Dactylium* at our farm at Gossau, near Zurich. We watch for it and our pickers are trained to report it immediately.

A simple treatment with chloride of lime and the danger is over. Yet neglect for three days can infect a whole nursery and months may pass before the disease is eradicated.

One minimizing factor in the danger from the air borne diseases is that the number of new infections starting from them is ordinarily small. The chances of an air borne spore reaching a mushroom bed are slight indeed, but the one in a million is the one we must watch for.

What of the workmen, their shoes and tools? Unquestionably they can spread disease from bed to bed and room to room, but I doubt that they often bring the original infection to the nursery. They are not where the disease is in nature and they do not often walk on or touch the beds with contaminated articles after the " sweat out." I do not rule them out but say that as carriers of the original infection they are relatively unimportant.

If then the nursery does not have a disease problem the air and the soil are the most likely to carry one in. What good are all the disinfections and fumigations and board scrubbings when no disease is present. You very rightly and indignantly query, " Yes, but where is such a nursery?" I agree that none exists, but again I say let us be specific. No nursery is disease free and no nursery has all the possible diseases. Those that are established must be treated for what they are and those that are not established must be watched for, but the general sanitation measures except for soil treatment will not exclude them.

There is no excuse to-day with the present state of our knowledge of composting for the presence of any common indicator weed moulds in mushroom beds.

I should like to end the discussion by illustrating with a few concrete examples what I mean by specific control. The case of the pygmy mites has already been told. Let us examine a plant badly infected with *Myceliophthora* or a yellow mould. No matter where it came from, though it probably first entered in contaminated soil, it has spread till every bed is contaminated with it.

I have seen many such plants struggling along with half crops or two-third crops where the infection stopped all production after the second or third break. I know of one such plant where the grower was advised to tear the buildings down or abandon them as he would never free himself of the infection.

General cleanliness will not control it, neither will the usual sanitation measures. The fungus is growing in the beds not out in the manure yard or down in the aisles. Fumigation of an empty house is practically of no value even when trays are used and set back into a room from which a badly infected compost has just been emptied.

The obvious answer is to heat each house to 160° F. before it is emptied. The time when the spores are distributed is when the compost is disturbed, when it is being carried out. Until that time the spores are there, quietly waiting deep in the beds.

But what if the nursery is not equipped to be steamed-out or heated before emptying? The case is not hopeless. Interpose a barrier between the spores and the new compost. If the spores must fly un-killed do not let them drift into the new rooms, especially the uncased ones. Do not rely on wind direction to carry the spores away. The spores load the air while an infected room is being emptied and after it is emptied, and many of those spores will fall on the surfaces of the nursery. The important surfaces are the compost pile, the uncased beds and the soil pile after treatment.

With the yellow moulds, a mass infection is necessary to cause any considerable loss. All of them have slow and limited growth in the bed. One spore germinating will infect a handful or two of compost. Absolute control is not necessary. Spread during any one crop cannot occur. The infections are those already started and no secondary infections repeat the cycle. Once this fact is realized, control becomes simple.

All doors and vents of the rest of the plant must be closed except to the rooms in production while the emptying is in progress. The fans must be turned off. Then the business of emptying can proceed without worry but, naturally, with care. When finished the spent compost that might have fallen to the floors inside and out must be cleaned up and the walk-ways washed with water and a broom.

A couple of hours afterwards the vents can be opened and the fans turned on. The only other measure needed will be a good and thorough peak heat to 140° F. in air and compost.

Control will not be 100%. Remnants of infection will appear in succeeding houses, but as the practice is continued, less and less infection will be seen and eventually the yellow mould will disappear. I have seen it happen. Then the need for the vent closing during emptying is past and the top peak heat of 140° F. can be relaxed.

Sounds easy! It is when the grower understands what he is doing and what kind of an enemy he is fighting.

The *Ditylenchus* nematode is not common in England, nor any more in America, but it can cause very considerable damage as several English growers can testify. It is almost surely introduced with the soil but once in the mushroom house it can persist for crop after crop in the bed boards since the dormant stage is very resistant to disinfecting agents or heat. Sanitation measures in general will not help but specific treatment will. The soil should be treated of course to prevent new infections from the fields. But in the house before the new crop is filled a special treatment is necessary.

We have long advocated heating the bed boards in water as near boiling as it is possible to bring it. Before treatment the boards should be moist for a day or two to bring the nematodes to an active condition. One such treatment should be enough but if the nematodes are established in the wooden upright girders a treatment with strong creosote at contact points with the bed boards may be also required. Naturally the house must be aired for several days afterwards but if the creosoting is confined to the places where the nematodes can reinfect the beds and not made general the danger of rose comb is minimized.

The one point again to remember is that this is a specific treatment for a specific pest and when that pest is no longer present then the treatment should, by all means, be abandoned. Heating bed boards not infested with nematodes has little value. There is no use setting bear traps when no bears are left to be trapped. The security it gives one may be false if the danger lies in an invasion of rats.

And finally the case of La France disease! Here we are dealing with an unknown but very dangerous adversary. That the cause is unknown does not make the disease any less real nor its infectious nature any less significant. To deny its existence is like denying that a bank robbery occurred because the robber has not been caught. The sensible banker will increase his vigilance after the robbery of a neighbouring bank.

The sensible grower will learn about La France disease and then watch for it in his houses constantly. In our present imperfect state of knowledge of the disease we cannot even tell you whence it comes or how it is carried.

We can tell you that once present it can spread like wild fire in a house. Ordinary sanitation has not excluded it nor eradicated it. Here is an example where more information is needed in order to make our control specific. Until the knowledge is forthcoming we must do more than is probably necessary.

This is one disease which is almost surely spread from house to house by the pickers or other workers. It may be carried in the debris from spent compost. It may even go from house to house by air borne material or be transmitted by flies. Unlike the yellow moulds a single infection can involve a large portion of a bed. Secondary infections probably occur within a producing house.

The obvious answer is not easily applicable to British conditions.

That measure is to stop mushroom growing altogether for a few months. We have applied this simple remedy in America where the crop is, in general, seasonal, and have eradicated the infection completely from all plants where it appeared.

Here where the crop is not seasonal except for the glasshouse growers, the rhubarb growers and the outdoor growers, it would work a real hardship on the owner of the nursery to have to go out of production for even a short period. We have evidence that the infection may return probably from some outdoor source, every season.

Our present recommendation is to heat out the house before emptying, but that again is imperfect if the disease can be transmitted during cropping from house to house. Some material must be sought which will kill the mushroom and the disease from any part of the beds where infection occurs. The efficacy of such a measure will depend on vigilance to spot infections very early and treat them completely.

But whatever measure will eventually be found effective it will have to be directed toward the control of this particular disease and, once the disease is eradicated, the control should be abandoned until fresh infections occur.

I personally believe that the disease can be held in check even in England and that no one need assume a hopeless attitude when he finds himself confronted with the problem.

In conclusion I should only like to say once more that **disease is a specific relationship between the causal agent, living or non-living, and the mushroom, and that most of the serious epidemics can be controlled if the grower will direct his efforts to the individual problem facing him and not waste his time with a general attempt to make his mushroom nursery into a sterile environment.**

Question and Answer Session

Among the questions asked and answered after the lecture were the following:—

What should I look for in La France disease?

" Usually a cluster of mushrooms grow with a speckled stem, are small stemmed and taller than usual. If it is dry rot it is certainly not La France because La France has a slimy rot connected with it. It may appear in different patches on the beds maybe 5′ or 10′ away from each other. There are little circles of infection. On such affected beds the mushrooms never appear again." Dr. Sinden went on to say that the most effective treatment was to heat up the beds and not to visit infected houses and non-infected houses in quick succession. The spawn itself did not disappear.

Ink Caps—What is the state of the compost?

The cause of Ink Caps is probably under composting and the presence of ammonia. Over-composting probably more than anything else causes brown plaster mould.

What about Eelworn?

Ditylenchus nematodes are quite easily killed at high temperatures. Insecticides are not necessary if you really peak heat.

Chaetomium (Green Mould)—Are you afraid to go above 140 degrees to give control?

" I would not go above 140 degrees if the disease was not present and 130 to 135 degrees is quite enough to give control. 140 degrees is a fairly critical temperature. The cause of Green Mould is too high temperature and too little air."

How do you treat Truffle?

The best control for it is the addition of copper sulphate. Truffle is very infectious."

Is it possible to short compost with synthetics?

" Yes. Mr. Stewart-Wood, for instance, has worked this quite satisfactorily and in America something like 30 per cent. of the mushrooms are produced on synthetics. When we began using it in America we started off with short composting and the result is all growers automatically do it this way now, though for no logical reason some of them still stick to 20 days with manure. One large farm now sells manure already composted. I have no doubt myself that synthetic compost can be short composted just as well as stable manure. Remember that if you compost for 20 days you lose half of your material. We (at Butler County) have never used anything but racing stable manure. We have three sources of supply, one 1,000 miles away, another about half that distance and a third within lorry distance. I do not know anything much about your own MRA synthetic.

Dr. Sinden was later asked if he knew of anywhere in this country where a grower could send his compost and mushrooms and be told definitely whether it was infected with La France or not. He said he wished there were, but he did not know. This disease, he said, was a very definite thing. Perhaps Miss Gandy might be able to help, or Darlington's laboratory.

Before finally closing, Dr. Sinden had this to say about sanitation: " Give your mushrooms a chance to grow. Do not make your houses into isolation wards. It is all right if you have the money to spend, but we do not have that kind of money."

Thanks to Dr. Sinden on behalf of the growers were expressed by Mr. Raymond Thompson.

We hope to publish a condensed report of Mrs. Hauser's in a future issue.

1956 INTERNATIONAL CONFERENCE DATE FIXED

Minister of Agriculture, President d'Honneur

The French Minister of Agriculture has consented to be President d'Honneur of the Third International Conference on Mushroom Science, the opening date of which has been provisionally fixed for Wednesday, 6th June, 1956.

The hope has already been expressed that the MGA will be strongly represented at this conference.

FOURTH ANNUAL
MUSHROOM INDUSTRY EXHIBITION

Few will quarrel with the contention that the Fourth Annual Mushroom Industry Exhibition at the Corn Exchange, Brighton, on 5th and 6th October, attracted more mushroom growers than ever before and without question the lectures given by Dr. E. Hauser and Dr. J. W. Sinden, both of Gossau-Zurich, Switzerland, did a great deal to boost up the attendance. It would seem certain that lectures or something similar must continue to have a prominent place in this two-day event.

The very fine hall in which the exhibition itself was staged lent itself well to a show of this kind and the general lay-out proved reasonably satisfactory.

Much attention was paid to something new in this annual exhibition and added interest was certainly provided by two small pre-packaging machines which were demonstrated, a stand devoted to pre-packs of various descriptions, and another which showed oil-fired boilers, all three pin-pointing an inevitable trend in the industry to-day. Nevertheless the sundriesmen, old friends of the industry and of the MGA, once again formed the back bone of the exhibition and it was satisfactory to note that on the first day, when the programme was much less crowded, the exhibition hall throughout the day was thronged with growers and all the stands appeared to attract considerable interest. It was again a chance, given and taken, of the many people behind the scenes in the industry being able to meet those people who actually produce the end product, the mushroom.

The competition entries were, rather surprisingly, slightly down on the previous year, but all classes were well supported with competition exceptionally keen. Those responsible for staging the exhibits this year excelled themselves and many visitors spoke in complimentary terms of those who again made it their business to see that the exhibition mushrooms were pleasingly staged.

As for the lectures in the adjoining theatre, well over 300 growers attended Dr. Sinden's lecture on Wednesday afternoon and nearly that number listened to Mrs. Hauser on Thursday morning. It had been originally planned for the lectures to be given in the reverse of that order but unfortunately Mrs. Hauser was indisposed on Wednesday and it was only by a particularly tenacious effort that she was able to give her lecture the following day.

PRESENTATION TO CAPT. AND MRS. LAWRENCE

After the annual general meeting of the MGA at Brighton, Mr. G. W. Baker, on behalf of the Executive Committee, presented Capt. Lawrence, the retiring Chairman, with a pen and pencil, and Mrs. Lawrence with a Marcasite brooch.

Mr. Baker spoke of the affection with which both Capt. and Mrs. Lawrence were regarded by the Committee. Both Capt. Lawrence and Mrs. Lawrence responded.

MUSHROOMS A HEALTH FOOD

Consumption in England three times what it was

Chairman of the MGA, Capt. G. P. Lawrence, speaking at the official opening of the Exhibition at The Corn Exchange, Brighton, had this to say about mushrooms:—

" Modern science is beginning to justify the traditional belief held since the days of the Romans and the ancient Egyptians that mushrooms are a health food."

He was speaking at the opening of the annual conference of the Association, which is a specialist branch of the National Farmers' Union.

" Recent research in France and the U.S.A.," he continued, " has established that the mushroom contains many vitamins as well as traces of valuable digestible minerals such as iron. It also contains important quantities of folic acid, which is good for anaemia and for the complexion, and pantothenic acid and biotin, which are said to have rejuvenating effects.

This research is still in its early days and much has to be definitely proved. Enough has been discovered, however, to demonstrate that mushrooms make a most useful contribution to the national diet.

The demand for mushrooms is greater than ever before and Britain is to-day eating three times more than before the war. But our production is still only half that of France, where mushrooms are widely used for many kinds of dishes, as well as being eaten as an individual dish.

Though the British housewife is steadily becoming more and more mushroom conscious, she has yet to realise that she need not peel the cultivated variety before cooking it. In fact, if she does peel it not only is she making herself unnecessary work but she also destroys some of the mushroom's health-giving qualities."

Capt. Lawrence said that although exact figures were difficult to obtain mushrooms certainly now ranked among the most valuable horticultural crops. The industry produced 40,000,000 lb. a year (nearly 18,000 tons).

TRADE EXHIBITS

Once again the various trading concerns connected with the mushroom industry lent this annual exhibition there full support and undoubtedly the excellent way in which they had, individually, made their stands attractive had much to do with the opinion, expressed by the Mayor of Brighton, Ald. J. A. Trevelyan Leak, J.P., when, speaking of the exhibition, he said he was taken greatly by surprise when he entered the hall and added that this Mushroom Industry Exhibition was quite the neatest and most attractive he had ever seen at Brighton.

All the standholders expressed satisfaction with the general arrangements and with the amount of business done and, on Thursday evening, representatives of the various concerns held a short meeting, presided

over by Mr. G. W. Baker, the new Chairman of the MGA. The meeting was called so that standholders could make suggestions for improving next year's exhibition and to ascertain the wishes of the trade in general on the question of the venue of the 1956 exhibition.

Messrs. Adco Ltd., of Harpenden, Herts., displayed their well-known and popular Adco "M" Activator; **The Atlas Basket Co. Ltd.**, of Harpenden, Herts., with **The British Basket & Besto Co. Ltd.**, of Cuxton, Rochester, Kent, **Messrs. Arthur Coomer Ltd.**, of Grove Road, Farlington, Portsmouth, and **Messrs. F. Gough & Son** of Fishergate, Norwich, all displayed baskets of various types. **Messrs. E. O. Culverwell Ltd.**, of Malling Works, Lewes, Sussex, **Messrs. J. E. R. Simons Ltd.**, of Natts Farm, Harlow, Essex, and **Messrs. H. D. Steele & Son Ltd.**, 19 Railway Approach, Worthing, Sussex, all showed manure turners which have become established favourites with growers in this country and are beginning to attract overseas attention. The spawn makers—distributors—sundriesmen in general once again gave the exhibition their solid and substantial support. They were:—**Messrs. W. Darlington & Sons Ltd.**, of Worthing; **Messrs. Geo. Monro Ltd.**, Hertford Road, Waltham Cross; **Messrs. Pinkerton's Scottish Mushroom Laboratories** of Millerston, Glasgow; **Messrs. S. A. F. Sampson Ltd.**, of Oving, Chichester, Sussex, and **Messrs. J. E. R. Simons Ltd.**, of Natts Farm, Harlow, Essex. Once again the **Cowling Group** from Kirkgate Market, Leeds, were the only firm of salesmen to take floor space, although a particular attempt had been made this year to attract wider attention in this particular sphere. **The Eclipse Peat Co. Ltd.**, from Ashcott, Somerset, showed a wide range of peat, whilst **Messrs. Thos. Elliott Ltd.**, of Eagle Mills, 120 New Church Road, London, S.E.5, with their large corner stand covered the wide range of sundries in which they deal. Insecticides were displayed by **The Murphy Chemical Co. Ltd.**, from Wheathampstead, Herts., the up and coming **Shirley Organics Ltd.**, Vicarage Wharf, Battersea, S.W.11, showed comparatively little but discussed a great deal on the merits of their new activator, whilst **Stable Manures Ltd.**, from Lancing and Newmarket, entertained many friends and also had a lorry loaded with manure on show at the rear entrance to the hall. **The Grower**, of 49 Doughty Street, London, gained many new friends in the mushroom world and at least one new friend in the MGA for they loaned valuable assistance with the stand on Thursday.

What of the newcomers? Showing various types of lime and chalk were **The Duncton Quarrying Co. Ltd.**, of Duncton Hill, Nr. Petworth, Sussex, indicative of the increasing interest and use of these products by growers. **Eburite Corrugated Containers Ltd.**, Park Royal Road, London, N.W.10, have been actively studying the pre-pack mushroom market for some considerable time and there were many enquirers at their stand. Working machines always attract interest and thus the two small machines shown by **British Celanese Ltd.**, of Hanover Square, London, W.1, drew a regular crowd. With one of the machines priced as low as £150, larger commercial growers saw pre-packing on the farm possible without a too heavy financial outlay. Oil firing too gains adherents daily and good business is reported by **Messrs. G. C. Pillinger & Co. Ltd.**, Sutton Common Road, Sutton, Surrey.

ANNUAL LUNCHEON RECORD

No fewer than 174 people, the most ever at this function, sat down at the Annual Lunch which took place at The Old Ship Hotel. At the last moment a number of late-comers set something of a problem but eventually all were accommodated.

Among the guests was the Mayor of Brighton, together with representatives of various Corporation Departments.

Capt. G. P. Lawrence, presiding, had a special word of welcome for Mr. T. Ainslie Robertson, Chairman of the Glasshouse Crops Research Institute at Littlehampton, who had arrived in this country from Australia only the previous day. Capt. Lawrence also warmly welcomed the Secretary of the French Federation of Mushroom Growers, M. Dekeirel (Federation Nationale des Syndicats Agricoles des Cultivateurs de Champignons).

After also thanking Mr. Thompson (who arranged the luncheon) Capt. Lawrence said:—

"An idea came to me yesterday afternoon when I was sitting in a very exalted position during Dr. Sinden's Lecture. I couldn't help feeling that when Dr. Sinden was enumerating some of the horrors that are to be seen on farms, the audience were looking at me and saying to themselves, I'll bet he saw that on the Chairman's farm. Well, as a matter of fact he didn't, because, to my loss, Dr. Sinden has never visited my farm, but if he had I would have taken care to give him something to get his teeth into. For, in my very early days in the Army I very soon learned one very important thing. It was the occasion of the General's annual inspection, and if the battalion was to get a good report, it was necessary to find out what his particular fad was that year. It may be that he abhorred dusty blankets. If this was so it was easy to leave a very bad case around where he couldn't possibly fail to see it. Or it may be that he was a clean feet fanatic, if this was so it was seldom necessary to take any positive action. Any way, a dusty blanket or a pair of unsavoury feet gave the General his chance. He could blow up, demonstrate the fact that no one could pull the wool over his eyes and that he knew his job. After that all would go well and the battalion was sure to get a good report (laughter).

A fortnight ago the Committee met at my place, and the day before when the girls were cleaning off some trays I told them to stay their hand and go easy. It wasn't to be a regular thing but I told them that the Committee were coming round the next day and would want to find something wrong. Next day when the Committee came into that house I carefully steered them up the right alleyway. It worked. It always works. They clustered round the offending tray like bees round a honey-pot, all eager to give their views as to why the little brown pinheads had died. F. C. Atkins I think gave the final diagnosis. I don't know what it was, but I could have told them, for if you have just picked about a pound and a half a foot off the first flush there are bound to be a few

who just couldn't make it (laughter). It was a very great delight to me to see the pleasure that I had brought into their drab lives and it brought quite a lump to my throat. And I would have felt amply rewarded for any little trouble I took, if, on the way home, one or two of them said to their travelling companions, " Poor old Chairman, he really has got something to moan about, hasn't he!"

To speak on another matter; you know it is our custom to ask someone connected with our Industry to come as Guest of Honour and address us. Well, I am sorry to say that we have not been able to get anyone. I have been trying since last December, without success. We asked the Minister of Agriculture, but he said that he wanted to go to Bournemouth. I should have thought that he would have been happier here with us in Brighton (laughter). There were also two, either of whom I would have been glad to have with us, Mr. Ainslie Robertson, the Chairman, or Dr. Toovey, the new Director of Research of the Littlehampton Glasshouse Research Station. I was told just before I sat down to lunch that Mr. Ainslie Robertson is as a matter of fact here do-day, and that he only arrived in this country yesterday. Anyway, when I originally asked them if they would come, it was a case of one and all began to make excuses. They said, or rather their secretaries said, " He is gone on a journey " and indeed they had. One had gone to Australia and the other to Nigeria. I was particularly keen to get them to meet us as I wanted them to see that we were a progressive lot and that we really did want research. Also, I wanted to tell them that we had not all of us had the advantage of an education in scientific terminology and that some of us did not always understand the long words. I remember some time ago at a meeting of the Mushroom Research Association that one of the Board gave what was obviously a clear and concise exposition about something or other but emphasised the point that he was only speaking in an " empirical " sense. As I didn't know what " empirical " meant, and didn't like to ask, I didn't know what he was talking about, so had to sit with a glazed but intelligent look on my face. Unfortunately the speaker who followed also said he was speaking " empirically."

Well anyway there's a silver lining to every cloud and the Mayor of Brighton has most nobly stepped into the breach and said that he will address us.

In reply the Mayor of Brighton, expressing thanks, confessed he had been taken a little by surprise by the outstanding quality of the Exhibition and the extent of this annual lunch which, he said, " is one of the best I have ever been to." He hoped Brighton had proved satisfactory in every way although he understood there had been some little difficulty in the matter of hotels. This, he said, would certainly be enquired into as Brighton was exceedingly anxious to attract conferences of all kinds. He expressed his thanks for the very warm welcome which he had received and hoped the Association would come to Brighton whenever possible.

ANNUAL MEETING

Capt. Lawrence presided over an attendance of between sixty and seventy members at the Annual General Meeting of the MGA which followed the annual luncheon.

After the Minutes had been confirmed a vote of thanks to Dr. E. Hauser and Dr. J. W. Sinden was unanimously passed, on the proposition of Mr. W. A. B. Harding, seconded by Mr. R. Duthy. Said Mr. Duthy: " The majority of people have come down to Brighton, induced largely by the fact that Dr. Sinden and Dr. Hauser were to lecture. They came at great inconvenience to themselves and we are all most grateful."

In his annual report the Chairman (Capt. Lawrence) said:—

" You will not be surprised if I first of all refer to Publicity and this again was far and away the most important task with which your Committee was faced during the past year, and it is as well to note that in addition to the fact that your Executive Committee discussed this matter at all their meetings, the ground work was done by a small Publicity Sub-Committee which met every month. This Publicity is as you all know, a vexed business, and the scheme which we put into operation over a year ago was a voluntary contribution of one penny for each carton of spawn purchased. To be quite honest the amount raised has been somewhat disappointing and the Committee have felt all along that if the spawn distributors would only operate this scheme to the best of their ability the amounts raised would have been far larger. There are exceptions to this, of course, and one spawn distributor, applying this scheme very thoroughly, finds that no less than 90% of his customers are contributing. This shows what could be done with the necessary effort. On the other hand your Committee is well aware of the difficulties which face the spawn distributors in this matter and are grateful for the co-operation so far given. I am bound to say, however, that your Committee feel that much more could and should be done in this matter and I would again ask the people concerned to make another effort to get this scheme working satisfactorily. Mushroom Publicity after all is in the interests of everyone within the industry and everyone stands to benefit from increased consumption. Publicity itself is a peculiar thing and it is always difficult when embarking on any Publicity campaign to produce tangible results within a short time. This Publicity Scheme of ours has proved no exception in this particular matter, but I feel that some results of this limited campaign are already quite apparent.

It is interesting to note that following the Mushroom Week, at Tunbridge Wells, on the occasion of the 1954 Exhibition, the mushroom sales in Tunbridge Wells and Tonbridge showed a spectacular rise and more important still is the fact that since that time mushroom consumption in these two towns has remained on a far higher level than it was before.

One of our most outstanding successes in the field of publicity has undoubtedly been a fairly frequent reference to mushrooms on television and we are certainly grateful to Frances Perry for her interest and co-operation. In addition, as you know, we have produced recipe leaflets, mushroom posters, don't peel slips, and a new leaflet seen on the MGA stand at this Exhibition, " Winning ways with mushrooms." As for our future plans, these do include a stand at the 1956 British Food Fair to which we are already committed to the extent of £250.

In concluding this reference to Publicity, I would like to pay a tribute to the work of the Publicity Sub-Committee Chairman, Mr. Reed, who has worked untiringly for this cause. I do say here and now that in my opinion Publicity is vitally important to the mushroom industry and it should be pursued with the utmost vigour.

Farm Walks: During the past year we have not held as many farm walks as we would have wished, due to a variety of reasons, but I am glad to say that already arrangements have been made for holding an increased number in 1956. I am particularly glad to state in this connection that an area committee has already been formed in Lancashire to promote such walks. Your Committee hope that eventually area committees will be operating to cover the whole of England and Wales and perhaps Scotland.

Removal of Office: An important happening in the life of the MGA occurred last November when the office was moved from Yaxley to the NFU headquarters at Bedford Square. This was a move which had been considered for some considerable time without any action being taken and your Committee decided to make the break after full discussion. It was without question a wrench to move from Yaxley, but by and large and in spite of the obviously increased expenditure, the move has proved well worth while and has enabled the Association's business to be conducted more efficiently. It has also resulted in a far greater number of visitors to the office than ever was the case at Yaxley and it appears reasonable to suppose that as the years go by the efficiency and the number of visitors will increase.

Bulletin: The Bulletin continues to be published each month and it does involve a considerable amount of work. This year publication costs on the printing side were increased by £180 and it became necessary to find additional advertising support. I am glad to tell you that this additional revenue has, in fact, been found. It is of interest to note that the cost of producing the Bulletin almost equals the total amount received by the Association in subscriptions from members.

Among other things which engaged the attention of your Committee during the past year was the move of the Mushroom Research Association from Yaxley to the new Glasshouse Research Institute at Littlehampton. It is disappointing to note that there has in consequence been a break of a year in mushroom research, but I am glad to say that things are now beginning to move. The attention of your Committee has been directed towards the suggestion of mushrooms being included in the Ministry of Agriculture Annual Returns, but whilst for the moment this was not found practicable, your Committee is to raise the matter

again. It is hoped eventually to get mushrooms included and thus to obtain vital statistics in connection with the industry. During the year there has been a suggested financial scheme to assist mushroom growers in the matter of credit, but this unfortunately fell through, although the latest news is that some similar scheme may be revived in the near future.

International Conference: The 1956 International Conference is due to be held in Paris, in June, and the Association hopes that as many members as possible will be present. At the last International Conference, the MGA representation was very poor, but for 1956 there are hopes of an organised party being arranged.

Exhibition: I now come to this present Exhibition and the important visit of Dr. Hauser and Dr. Sinden. I would like to say how grateful we are as an Association to them, and also to the Exhibition Sub-Committee headed by Mr. G. W. Baker, Vice-Chairman of the Association, for making this visit possible. In the world of mushrooms, Dr. Sinden and Dr. Hauser occupy a place of the greatest importance and those who have listened to their lectures over the past two days cannot fail to have benefited considerably from the advice given. The Exhibition itself has again entailed a great deal of work, but I feel sure that everyone will agree that the effort made has again proved well worth while and I for one hope that this Exhibition will maintain its prominent place in the affairs of the MGA.

All of you will have no doubt noticed the absence of a detailed financial statement at this meeting. This is due to the fact that we have had to alter the end of our financial year from the end of August to the end of October in order to comply with the overriding rules of the National Farmers' Union. It would appear that we should never have departed from these rules officially. It will now of course be necessary later this year or early next year to call a special meeting of members for the purpose of presenting the accounts. Now that I am on the matter of finances, I am glad to say that the financial improvement apparent last year has been maintained, but unless some additional source of revenue is found we cannot expect as an Association to build up any large financial reserve, as this is under present circumstances plainly quite out of the question. Membership too has also been maintained.

I cannot close this report without paying tribute to the work done by the Executive Committee during the last year. The attendance has been excellent and the members have been most energetic. Quietly but efficiently the Editorial Board too, who watch over the Bulletin, go about their work and members should be most grateful. Lastly a word about our Secretary, Winston Alderton, who has been as indefatigable in his efforts as ever. I hope the time is not too far distant when the Association will be able to afford him full time clerical assistance."

The Secretary, in his annual report, explained that in order to conform to the overriding rules of the National Farmers' Union, the MGA financial year would now end on 31st October, instead of 31st

August. Apparently the change which had been made from October to August had not been authorised by headquarters. All NFU branches ended their financial year in October. Because of this change no balance sheet would be presented at the meeting but would be available at a special meeting to be called later—probably early in 1956. He stated however, that the amount received from all sources to the end of August, was £5,882 15s. 10d., compared with £4,244 the previous year. Even allowing for £1,550 collected for publicity the figure still showed a slight increase. Membership had been maintained but it would be advisable for the full figures to run in conjunction with the end of the financial year. However, for an 11 month period Grower Membership at 331 was slightly down, as also was the Associate Membership figure of 214. With a full month's renewals still to come, he had no doubt that last year's record membership would prove to have been maintained and possibly increased. The Bulletin continued its steady progress and he was especially grateful to the regular contributors and advertisers. He welcomed too the return of a prodigal—Mr. Middlebrook, who had commenced his contributions again.

The Executive Committee met seven times, to which must be added the monthly meeting of the Publicity Committee, the members of which had devoted much time and energy in the interests of their fellow growers. Attendances at Executive Committee meetings were:—

Capt. G. P. Lawrence (7), Messrs. G. W. Baker (7), G. V. Allen (7), E. A. Gook (7), R. Thompson (7), F. C. Atkins (6), W. A. B. Harding (6), G. V. Reed (6), F. Bleazard (6), N. R. Cooper (5), F. L. Filmer (5), J. Stewart-Wood (5), A. Campbell Melville (3), A. G. Pointing (3), G. W. Boxall (2).

Messrs. Reed and Campbell Melville were co-opted to the Committee at the first meeting and were not therefore eligible to attend that meeting of the Committee.

There were nine nominations for the five vacancies on the Executive Committee and after a ballot it was announced that those elected were: **Messrs. F. Bleazard** (Lancs.); **J. A. Linfield** (Sussex); **A. Campbell Melville** (Scotland); **G. V. Allen** (Kent); **S. Middlebrook** (Yorks.). Former member of the Committee, Mr. J. Stewart-Wood, withdrew his nomination.

The Chairman, in opening the discussion on the policy for 1955, said the Association was mostly interested in publicity and a lot of things had arisen since the last meeting. Publicity was a most important and vital matter. He went on to say that he estimated that, at the highest, one in four were contributing under the present penny per carton voluntary scheme. Two years previously when he " was shot into this job at Harrogate " he found himself charged with trying to boost publicity and it had been pretty difficult going so far. " Without money we cannot really do anything," he said. Reasons advanced for not contributing to publicity include: " I do not believe in publicity." "It is not necessary." " I have paid since last December and nothing has happened." " What

about us chaps in the North?" " I cannot afford it." " I will come in when I find results." He then went on to say that he found himself in rather a difficult position in that what he would like to say, he did not think applicable to members present. The question of publicity was that " if you want it you will have to pay for it in money and in service."

Captain Lawrence then paid tribute to the work of **Mr. Thompson** and **Mr. Reed** in the matter of publicity and said this sort of thing could not go on for ever. **Mr. Reed** in particular had done an awful lot of work and with his background of knowledge of advertising and publicity **Mr. Reed** knew what he was talking about. What we had asked for in the past was one penny for every £7 of the mushrooms sold; the maximum on that would be about £3,000 a year. **Captain Lawrence** estimated that one farthing on every chip of 2½ lb. would produce somewhere about £12,000 a year. He went on: "If anybody asked me to contribute a farthing for every chip of mushrooms, I would undoubtedly say yes."

After saying that he strongly supported individual efforts in publicity, especially in the provinces, and saying that everyone could do something by handing out recipe leaflets, etc., he repeated " It is a question of money and of service."

Mr. Guy V. Reed (Chairman Publicity Sub-Committee), in his report on the publicity position to date, first of all reviewed the situation as it developed in the past year, reported on the amount so far collected and the publicity obtained and finally outlined what, in his opinion, could be done if sufficient funds were available.

Mr. Reed said that when he become Chairman of the Sub-Committee there was a deficit of around £100 and, as there was bound to be a time lag between the 1d. per carton scheme starting and the actual collection of sufficient funds it was necessary for a certain amount of money to be collected without delay and salesmen, manure dealers, chip basket manufacturers and the trade in general were approached and the response from certain firms was immediate and most heartening.

At a reasonably early stage in the 1d. per carton scheme two things became apparent. First, though grateful for the spawn suppliers agreement to operate the scheme, we quickly found that they were not, as a whole, operating the scheme in the manner originally suggested and, as a result, contributions have not been up to expectations. **Mr. Reed** stressed that little blame could be attributed to growers for where the means of contribution had been made straightforward and simple, so the contributions had been most satisfactory and one supplier, operating the scheme in this manner, had found that over 90 per cent. of this grower customers were contributing, including non-MGA members. Naturally repeated efforts had been made to get the whole

scheme on this basis but unfortunately many suppliers found the difficulties too great.

The second point which became apparent was that at best, the 1d. per carton scheme could not produce more than two to three thousand £'s, even though operated 100% efficiently. This amount was all very well to get the ball rolling but was totally insufficient to do justice to the job of influencing fifty million people to increase their consumption of mushrooms. Thus, during the past year insufficient money had been collected to hire the services of a professional publicist, as had been hoped, and it became necessary for the job to be done by the Sub-Committee itself and the individual members in order to keep things going. Necessity being the mother of invention, thoughts were turned to devising an alternative scheme for raising money. He himself had had hopes of being able, that day, to have placed an alternative scheme before the members, a scheme for raising considerably more money and in keeping with this seven million £ industry, but the Executive Committee felt that no hasty move should be made and that the existing scheme should be given a further trial. With renewed effort it was hoped that things might improve. The Publicity Sub-Committee therefore continued to do the work themselves rather than perform the normal functions of such a committee. **Capt. Lawrence,** said **Mr. Reed,** had said that he estimated that he (**Mr. Reed**) spent at least a third of his time, during the past year, on publicity matters. Be that as it may, **Mr. Reed** went on, it is well to remember that I am only one member of the committee, all of whom have worked untiringly together with the Secretary, **Mr. Alderton,** who plays so many parts in the Association. That work could not go on indifinitely and, said **Mr. Reed,** if the Publicity Scheme is to be permanent, it must be set on a very much firmer and more business-like foundation.

After reporting on a visit he had paid to France to discuss with the French growers and the Chairman of the French Federation's Publicity Committee (M. Zinetti) on steps taken in that country to publicise mushrooms, **Mr. Reed** said he found there the same frustrating inability to do the job adequately because of lack of sufficient funds.

Dealing with the amount so far raised **Mr. Reed** said this amounted to £1,550 and so far publicity had been obtained in B.B.C. Broadcasts, Television (on a number of occasions), National and Provincial newspapers throughout the country, National magazines, particularly women's publications and trade magazines, electricity and gas cookery demonstrations throughout the country. The committee had co-operated with cookery book authors and other writers and in certain exhibitions and fairs in order to get mushrooms shown on various stands. Shortage of funds precluded us from booking our own space but we are already committed, as **Capt. Lawrence** had pointed out, to the British Food Fair next year. In addition, said **Mr. Reed,** 20,000 further copies of " Mushroom Recipes, Month by Month " had been produced, together with 20,000 copies of " Winning Ways with Mushrooms," 3,000 small

strip posters for shops and vehicle windows, etc., 200 large strip posters designed for use on vans, lorries and other larger sites, and 300,000 " Don't Peel " Slips.

Much of this publicity had been obtained without great cost, some without any cost at all beyond the enthusiastic and untiring efforts of members of the Sub-Committee. The aggregate monetary value of all this publicity obtained does, by commercial standards, amount to tens of thousands of £s. You can see therefore that such money as has been contributed has been well and truly multiplied. Salesmen had reported an increased demand and prices too had increased and, said **Mr. Reed,** " may we say that at least some of this has been due to the publicity effort?" and added " . . . . . you are getting a taste of what could be done with a full scale scheme."

Mr. Reed concluded by asking the meeting to instruct the Executive Committee to collect sufficient funds to enable a full scale and well planned campaign to be conducted. Such a campaign would, he estimated, cost between £20,000 and £40,000 per year. "At the worst," he said, " this should not require a contribution at the rate of more than ½d. per lb. of mushrooms produced. A very much lower rate might well be found to produce the necessary figure." " How many of you would worry at all if your mushrooms suddenly made ½d. per lb. less?" he asked. " Which of you felt the pinch from the 1d. per carton scheme and which of you haven't benefited many times over?" Mr. Reed concluded, " Let us not rely on our future prosperity on the part time efforts and free services on what M. Zinetti aptly called " Silly Boys " (those prepared to give time and service free for the benefit of others). " Let us contribute enough to pay our way in a sound and business-like fashion." He added that all the really successful industries with a good product to sell had found that it paid, over and over again, to advertise.

In the discussion which followed **Mr. J. E. Ady** proposed that the spawn distributors should be re-approached and asked to overcome the difficulties of operating the spawn contribution scheme. He also asked that the Executive Committee should give urgent attention to the problem of devising a scheme for collecting really adequate funds for publicity with a maximum contribution of not more than say ½d. per lb. of mushrooms.

Mr. S. Pointing: What about the three in four who are not contributing. Cannot they be gingered up and compelled to contribute?

Chairman: That brings in compulsion and is like a marketing scheme —a scheme which we have not yet arrived at. I do not like compulsion.

Mr. S. D. Griffin questioned the wording of the 1d. levy " sticker." He urged all growers to insist that the levy was charged and suggested that a new approach might be provided by charging a small levy per £ turnover. He suggested a ⅓d.

Mr. Ady: Give the committee the go-ahead to work out details themselves. They have done a very efficient job up to now.

Mr. R. Duthy: The whole problem appears to lie with the spawn

distributors. If you try to raise a levy per chip or per sq. ft. you will always find a lot of back sliders. Sure it is not impossible for half a dozen spawn distributors to get together and put the price of a carton of spawn up a penny? Why not have an independent chartered accountant to check the figures and make a return to the central fund. I feel quite confident that the spawn distributors cannot have any valid objection.

Chairman: They naturally do not want to disclose their accounts. We did suggest an accountant but they did not want one.

Mr. G. V. Reed: To clear up what appears to be a slight misunderstanding I would like to say that I am not suggesting ½d. per chip or per lb. What I suggest is that you tell your Executive Committee that you want them to try and draft a scheme which will raise sufficient money for a serious campaign.

Mr. R. Duthy: I suggest we publicise the names of those spawn makers who are not operating the scheme properly.

Mr. F. C. Atkins: I gather that, under the present scheme fully operated we would expect to receive £3,000 which, I gather from Mr. Reed, would not be much good. Do we want a substantial scheme or one of the £1,500 sort?

Mr. Griffin: 1d. in the £ sterling on a £7 million industry would produce £25,000. We have over 300 members and I for one would be happy to contribute that amount of 1d. per £ voluntarily to the publicity fund.

Mr. Stanley Middlebrook: Spawn makers do not charge enough for a carton of spawn. They are not charging any more now than they did before the war. Who is going to miss 6d. on a carton of spawn? It is fiddling to talk about 1d. Another 6d. isn't going to kill anybody. Is there any spawn distributor who has refused to operate this smaller scheme?

Chairman: No, but some suppliers will not put it on the bill but leave it to the customer to add. A certain number of growers just either do not notice it hasn't been added or do not bother to do so. If it was added to the bill we should get much more.

Mr. Middlebrook: The obvious answer is for the members to get their spawn from the distributors who will collect the money as required.

Mr. J. E. R. Simons: It is quite true that some growers do object to paying anything towards publicity. I think to attempt to solve this problem this afternoon, when I and my fellow spawn distributors have spent hours on it with you, is impossible. We distributors naturally wonder why you pick on us for this: not that I am against this publicity scheme, but we must bear all this in mind. It is always in the power of the grower to solve this problem. If growers advise spawn distributors that they want to add 6d. a carton for publicity then we should all be quite willing to collect it for you.

Chairman: We asked the spawn people to collect this publicity money because they provide a bottleneck to every mushroom grower. You cannot grow mushrooms without spawn. If all distributors operated the scheme and played fair all would be well. All I am doing is to urge the distributors of spawn to be more co-operative.

Mr. H. B. Luxmoore: The spawn makers are not the only people who are in the business. There are salesmen and others whom we buy materials from. I know several salesmen who have never even been approached for contributions.

The Secretary: Every salesmen on the list you supplied has been approached.

Mr. Luxmoore: Yes, but we deal with some additional salesmen now.

Mr. S. A. F. Sampson: Seeing that we have had the view of one distributor I should like to add mine and to say I hold strong views about this scheme. I am very much in favour of it and I certainly have not had anybody say they will not have my spawn because of the levy I add which, after all, is purely voluntary. I do feel that through the spawn distributors is the obvious way to raise this money and I do not see that, provided the growers are willing, why the 6d. should not be added and why the scheme should not operate.

Mr. Simons: I still feel it is in the hands of the growers themselves and in particular, in the hands of members of this Association. I offer no objection provided the scheme is voluntary.

Mr. Norman Jenks: Are we not doing the work of the Committee for them. Oughtn't the Committee to decide about this.

Mr. G. V. Allen: You here are the backbone of the MGA—you should go and talk to all other growers about this. I suggest you watch the Bulletin and see who contributes to publicity. I think we owe some of our sundriesmen, salesmen and manure dealers an awful debt and I think this idea of 6d. per carton excellent.

Mr. R. D. Dumbreck: It is the rank and file who are falling down on this matter.

Mr. J. Stewart-Wood: Is there any logical reason why the spawn people will not operate this scheme properly? I have sat on the Committee over the past two years and seen how tied up the Publicity Committee has been. So much time has been spent in talk—it is time we did something about it.

Mr. W. Stanley-Evans: Some of us have found that the TCB label has definitely improved the price of our tomatoes. Would it be worthwhile considering a publicity label for mushrooms to go on the chips of those who support this scheme? We should get 85 per cent. of the growers to tag along. We want every grower to contribute—our contributions alone are not going to be enough.

Chairman: Those who participate should be able to market under a specific trade mark or label? I think we have reached the stage when

we want a resolution about this 6d.

Mr. Stewart-Wood: We should go-ahead with the suggestion of printing, on our chip covers, that we favour this scheme. The spawn makers should put this 6d. on and be done with it.

Lt. Col. A. R. Curry: Have a squeeze on members who do not support.

Mr. Stewart-Wood: We all of us know we are on quite friendly terms with our spawn makers.

After further discussion Mr. Middlebrook proposed the following resolution: " We the growers at this meeting wish to pay at the rate of 6d. per carton of spawn, and ask the Committee to implement a means of bringing this into affect." Mr. Ady seconded and, on a vote, 32 were in favour, two were against and there were eight abstentions. Among the latter was Mr. Jenks who said he was not against publicity but the resolution put the cart before the horse. The meeting should have given authority to the Committee to find a way of raising the money and saying what they were going to do with it.

Mr. Pointing observed that if many had failed to contribute 1d. it was unlikely that they would be willing to give 6d.

Mr. Middlebrook: We all know that if we buy a carton to cover 40 ft. we can make it cover 50 sq. ft. without loss of mushrooms.

Mr. Atkins: Why do we not set up a national spawn agency, adding our own levy to it for publicity?

Before the meeting ended **Mr. Stewart-Wood** paid tribute to the work of the retiring chairman, **Capt. Lawrence,** who suitably replied amidst applause.

SINCE THE MEETING THE EXECUTIVE COMMITTEE HAVE COMMUNICATED WITH ALL GROWER MEMBERS ASKING THEM TO TAKE NO ACTION REGARDING THE PROPOSED 6d. LEVY UNTIL THE MATTER HAS BEEN FURTHER DISCUSSED IN COMMITTEE AND A STATEMENT ISSUED.

SOME CRITICISMS INEVITABLE

In a two day event of this kind some criticisms are inevitable, but those most often heard after the exhibition was over concerned two main factors. First, it was widely maintained on the second day that the programme for that day was far too heavy and that, for another year, something would have to be done to see that this second day's schedule of events was such as to allow of the grower to spend at least half the day in the exhibition. The second criticism concerned the fact that, on the afternoon of the second day in particular, housewives, attracted to the exhibition by the cookery demonstrations, were not allowed to

purchase any mushrooms and it appears from reports that all and sundry at the exhibition were bombarded with requests for mushrooms—whilst the MGA members were away at the Annual Lunch and A.G.M.! These two points will, without doubt, receive the close attention of the organising committee for another year and one suggestion which emerged was that the Annual Luncheon should be replaced by an Annual Dinner to be held on the evening of the first day and which should be preceded by the A.G.M. that same evening.

The cookery demonstrations arranged by the South Eastern Gas Board's Brighton office went on during Wednesday and Thursday, and, on Thursday afternoon, Miss Ellis Powell, who plays the part of Mrs. Dale in that long-established radio favourite, " Mrs. Dale's Diary," was present.

On the MGA stall various publicity leaflets, strip placards, recipe leaflets, etc., were on display in addition to the more serious publications concerning mushroom growing and it is interesting to note and indicative of the record attendance that sales of literature were an all time record for this annual event.

A large number of members gathered at Brighton, on Tuesday, 4th October, for an eve-of-the-show " get together " at The Adelphi Hotel.

COMPETITION RESULTS

The competition classes, whilst again attracting a good number of entries, did not come up to expectations in the matter of numbers, being about ten per cent. less than the previous year. This year the entries totalled 90, all of which were afterwards sold for MGA funds.

There was much favourable comment at Brighton on the actual staging of the exhibits and Mrs. Baker, Mrs. Allen, Mrs. Jones, Mrs. Gook and Mrs. Cooper, all of whom assisted, not only in this work but with the MGA stand, are to be congratulated.

Mrs. Frances Perry, the well-known Television broadcaster, assisted Mr. John Goaman, formerly Chief Marketing Officer, Ministry of Agriculture, in the difficult task of judging, and both exercised great care and patience in order to make sure that the job was well done.

Afterwards Mr. Goaman said:—"Of all sections of horticulture I take off my hat to the mushroom growers. Since the early 20's they have brought mushroom growing from a rule-of-thumb to an exacting science, and that with very little help from the Government at that. This exhibition shows what tremendous strides these mushroom growers have made.

Here is the prize list:—

The MGA Cup (three chips of white buttons packed 3 lb. in a chip). —1 Linfield Nurseries; 2 Broadham Produce, Oxted, Surrey; 3 R. Tumber, Fort Darland Mushroom Farm.

The Mount Cup (chip of white buttons packed 3 lb. in a chip).—1 Broadham Produce; 2 A. E. Adams, Henfield, Sussex; 3 R. Tumber.

The Broome & Green Cup (chip of white cups packed 2½ lb. in a chip).—1 Broadham Produce; 2 A. E. Adams; 3 J. E. Ady, Cranleigh, Surrey.

The Smart Cup (chip of white opens packed 2 lb. in a chip).—1 R. J. Hopkins, Hammer Lane Farm, Horam, Sussex; 2 Linfield Nurseries; 3 J. N. Smith, Faversham.

The Thwaites Cup (two chips of mushrooms, one containing not less than 3 lb. white buttons and the other not less than 2½ lb. white cups).—1 Linfield Nurseries; 2 Broadham Produce; 3 E. A. Gook, Faversham.

The Stable Manures Cup (open only to growers of a cropping area under 10,000 sq. ft., 3 chips of mushrooms, one containing 3 lb. of white buttons, one 2½ lb. of white cups, and one 2 lb. of white opens).—1 F. R. Knight, Langney, near Eastbourne; 2 Lt.-Col. Curry, Pulborough.

The T. J. Poupart Cup (best 6 chips of mushrooms. Two containing 3 lb. each of white buttons, two 2½ lb. each of white cups and two 2 lb. each of white opens).—1 Broadham Produce; 2 Gordon Smith, Linton, Maidstone, Kent; 3 J. E. Ady.

Dr. E. Hauser and Dr. J. W. Sinden, snapped at the Chairman's Reception. This was one of the rare moments when they were not surrounded by a crowd.

Op. page (*Top*). Capt. and Mrs. Lawrence, chatting with two visitors from Mexico, Mr. Victor Cano (left) and his wife Conchita (extreme right).

Op. page (*Bottom*). Pre-packaging machines attract attention. Picture by *Commercial Grower*.

(*Above*). Dr. Sinden wasn't given much peace at Brighton. Here he is answering yet another question. Photo by *The Grower*.

(*Below*). The two judges, Mrs. Frances Perry and Mr. John Goaman—the latter in characteristic pose—judging the competitions. *Commercial Grower* picture.

(*Top*). Competitors carefully weighing and checking their entries in the cup competitions.

(*Bottom*). A view of the exhibition a few minutes after it opened on the first day. Pictures by the *Commercial Grower*.

Two cup winners, Mr. G. W. Baker (Broadham Produce Co. Ltd.) on the right with Mr. Guy Atkinson (Lindfield Nurseries Ltd.) left. *The Grower* picture.

(*Bottom*). All this and Publicity too! A mushroom breakfast on a windswept groyne at Brighton.

Did you see the MGA tie at Brighton? Here's a picture of it. It is coloured green with seven MGA motifs. This tie, which, judging by the comments in the Trade Press has caused something of a stir, is obtainable from the Secretary, price 18/6d. Cash must accompany order.

Picture by courtesy of *The Grower*.

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Designed after consultations with growers, wholesalers and retailers, the Dring Mushroom basket embodies lightness, ease of stacking, rigidity and, above all, the wax impregnated board from which they are made *absolutely eliminates the possibility of the mushrooms being spoiled through the basket absorbing moisture.*

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PINHEADS

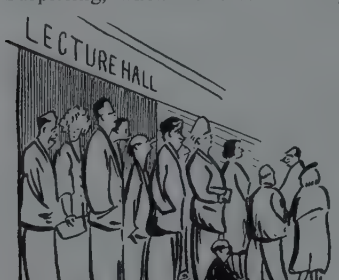
10. **Brighton 1955.** I am astonished at the number of people who know everything and yet, in the next breath, confess that things are not going as well as they might. In fact one wit at Brighton was heard to say that the only people who were doing well were those who were not there; they were too busy picking mushrooms!

11. What is the explanation of "dead periods" in mushroom growing? For about two weeks in mid-September the whole place seemed to go into a resting stage. I'm not referring here to the normal state of coma which demotivates the average British workman, but rather to the absence of pinhead formation despite full ventilation. We expected and indeed experienced it in the height of this hot summer, but one doesn't usually connect it with the " ideal growing season " of September.

12. **Brighton 1955.** What the spawn wallah really meant was " If you'll use my spawn you'll like it." What he actually said was " You'll use my spawn and like it."

" . . . and like it" (12)

13. We are frequently able to detect during early cropping exactly where some spawn cartons have been planted. Out of any one batch some cartons grow very slowly, some normally, some quickly and some with gale force. This inconsistency is to be deplored for two reasons. First, it belies the smooth, self-satisfied assurances of the spawn people that their product cannot be anything but invariably invariable. Second, it is impossible in one house to give all these varying growths their ideal conditions for simultaneous fruiting; worse than that, by treating the whole house for a certain state of growth other states may be definitely damaged with an inevitable depression of the first flush weight. Mind you, I'm not saying that ultimate yield is automatically different from these various speeds of initial growth, but I do say that control is made unnecessarily difficult. Surprising, when we're told that spawn-making has become a fine art.



" . . felt very small . . ." (14)

14. **Brighton 1955.** I must say I felt very small when I left the Hauser/Sinden lecture, where we were virtually told that for all practical purposes shelves went out with Adam. Nor did I feel much bigger when later on at the bar I was induced, accompanied by ribaldry and mirth, to take some of the " same medicine as before."

15. Our new high pressure steam boiler, designed to do all our space heating through calorifiers, all our peak heating, and to supply supplementary heat for spawn run, etc., will be oil fired.

We work out that the *additional* cost of oil over coal firing—for this all-in process—can be borne by the production of mushrooms from 500 sq. ft. of shelves. One of the many advantages of oil is freedom from want—in the form of non-delivery of coal in the height of winter. Unexpected explosion of the firing equipment may render us totally incapable of enjoying the other advantages!

16. Recent developments seem to support the idea that cecids, like springtails and truffle, come and go of their own accord. Someone has suggested, however, that cecids are probably " taken " as bait for miniature fish.

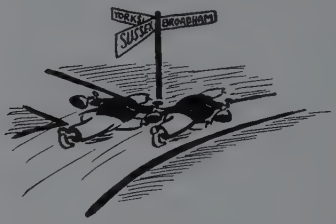
" . . . same medicine as before." (14)

17. **Brighton 1955.** A good deal of argument during the " Spawn Levy for Publicity " discussion at the Annual General Meeting hinged on the point: " If you can't get a penny out of them, how on earth do you hope to get 6d. or more?" There are some people who will give nothing and expect everything. Let's forget them, and think only of those who like playing fair. How can we get 6d. where we couldn't get 1d. before? It's easy. First of all perhaps 1d. wasn't enough. It's unimpressive; it doesn't appeal; it lacks imagination; it suggests a niggardly approach. Maybe 6d. isn't enough. But 6d. or even 1/- a carton should be simple to raise. Say a carton costs 7/-. Spawning rates throughout the country vary from 30 sq. ft. to 80 or 100 per carton. Is there any evidence that an 80 sq. ft. spread gives a worse crop than a 40 spread? If you are a 40 man and are asked to pay 1/- per carton for Publicity you would have to pay 8/- and could spread your spawn to 46 sq. ft. without any loss of crop and without losing your shilling! If you're a 70 man you simply stretch the carton to 80. You thus contribute handsomely to Publicity and it costs you exactly NOTHING. But even if we *don't* stretch the spawn and *do* pay 1/-, isn't it worth it to create a surer demand for our product?

18. **Brighton 1955.** I am told that the printing of 2,000 of those very large and impressive " m-m-m-m-Mushrooms " posters, prominently displayed at the Show, used up 2 cwts. of ink.

19. I have recently come across a new kind of hose clip which in some respects supersedes the popular Jubilee type. I quote from the makers' leaflet. " Fitted in 5 seconds; made of steel; cannot break; absolutely tight even at very high pressures; no injury to hose; no sharp protruding parts; no injury to workers." It is made by the O-Clip & Coupling Co. Ltd., 13 Tottenham Court Road, W.1. I am using them and find the above claims to be true. I recommend you to send for

details. Apart from the interest you'll find in the coupling itself, you will experience something quite novel and refreshing in the way of advertising and service.

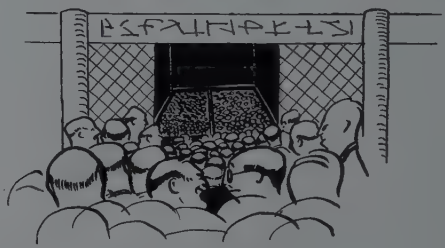


". . . burglariously run away . . ." (20)

20. **Brighton 1955.** George Baker, our new Chairman, was wanting a spot of lunch and asked me to keep an eye on the prize Cups while he was away. Rather ironical I thought, as it is always George's own people, Broadham Produce, who burglariously run away with most of the Cups.

21. Not for the first time I hear of a case where the foreman took the boss on one side and quietly informed him that if he (the boss) would take a long holiday things would begin to buck up. The idea appeals to me. With cropping as it has been lately I can't afford a holiday any more. Nice to know that I could better afford one if I didn't work any more. Does this theory augur a profitable retirement for mushroom directors? If so, I wish I'd realised it twenty years ago.

22. **Brighton 1955.** I have on occasion felt it my duty to comment on the anti-tonic effects of mushroom growing on the hair. Balding pates become more and more evident as worries increase. Indeed, observing the happy Show scene from an elevated position, a friend remarked, "It's almost impossible to see where pinheads stop and mushroom growers start."



". . . where pinheads stop and mushroom growers start. (22)

NEW CHAIRMAN AND VICE-CHAIRMAN

Mr. G. W. Baker, Vice-Chairman of the MGA for the last two years, was unanimously elected Chairman at a meeting of the Executive Committee which followed the annual general meeting. Mr. G. V. Allen was elected Vice-Chairman and the Secretary was re-appointed.

A sub-committee composed of Messrs. G. W. Baker, G. V. Allen, E. G. Gook and F. L. Filmer, was appointed for the express purpose of going fully into the matter of raising money for publicity.

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I have been thinking . . . . by Dr. R. L. Edwards

ABOUT DR. SINDEN'S LECTURE

It is sometimes stimulating and sometimes maddening to receive counsel of perfection. When I heard Dr. Sinden the former feeling predominated; not that I have any illusions about achieving perfection, but I am sure to have plenty of good company in my failure to do so, and Dr. Sinden admitted that mishaps do occur even on the best regulated farms. For a start I think there must be very few growers who *never* have any of his "weeds" or "indicator moulds."

I must say that Dr. Sinden's remarks about composting seemed to me rather like telling a batsman to keep the ball down, and he will never be caught, or saying to a golfer that it is fundamental to hit the ball straight down the middle of the course. Both are perfectly sound pieces of advice, but not always as helpful as some suggestions on the ways in which failures may occur, and what are the effects of some typical faults in execution.

However it is a very great help to hear such an important aspect of our work reviewed by a specialist who has deliberately set out to think about it afresh on its merits, instead of grafting new materials on to conventional methods. So perhaps it is ungracious to ask for more when we have been given so much guidance and food for thought.

I think we have had a general idea for some time that Brown Plaster Mould in particular was due to faults in the compost, but it took Dr. Sinden to state the inference that if we had B P M we should learn how to compost better. I remember hearing him say some years ago that he regarded his function when visiting American growers as primarily an irritant; his remarks on composting must have had that effect on some growers in Brighton.

Before we discovered that there were several different Yellow Moulds grouped under the name Myceliophthora or Vert de Gris, I was inclined to attribute that also to faults in the compost, without reaching any conclusion as to the particular fault responsible.

Ink caps have always been regarded as a sign of under-composting, but far from saying we should learn to do better, many growers rather welcomed them as a sign of a rich compost.

His passing reference to the air supply during peak-heating deserves more emphasis. Some years ago at Yaxley we calculated the amount of oxygen needed for the degree of further composting observed to take place during peak-heating and in a typical compost made by conventional methods one air change in about six hours appeared to be enough. Under-composted manure needed several times as much, and although I have no definite information I should expect short composts (by Sinden's method) to need more air. If braziers are used in the houses they also consume a lot of oxygen and will create a shortage for the compost unless plenty of air is supplied.

A minor point on which Dr. Sinden was quite definitely misinformed was the use of creosote on shelf boards. He said that if shelf boards were treated with creosote (against eelworm) Rose Comb would follow. In fact we frequently treated all the shelf boards at the Research

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Station with creosote about two days before filling and had no Rose Comb, and for a long time Noble Mushrooms Ltd. treated one side of their shelf boards after every crop, without ill-effect. We were both using well seasoned softwood, and I do not suggest that general use of creosote on all kinds of shelving is safe, but it is certainly not inevitably followed by Rose Comb.

It was good to hear the old bogy of flies from the compost heap dismissed: it has plagued us, as flies have, for too long. On some farms flies do come from outside the houses, presumably breeding on some alternative host fungus near by. I have known several farms where there were always many Phorid flies in all the farm buildings, not only in the growing houses, and they could not have come from the mushroom beds all the time.

Dr. Sinden's methods clearly work well on the very good farms where he is applying them, with a keen eye open for the first sign of a new outbreak, but I wonder what would happen on the average farm if all sanitary precautions, routine dustings, spraying, cleaning of bed boards, etc., were abandoned *before* bringing the cultural practices, composting, peak-heating, and heat-up before emptying, up to Sinden's standards. Many average farms exist on the verge of attack by pests or disease, and I think it is important that the positive aspect of Dr. Sinden's methods should be stressed before the things he is able to do without. The omissions attract the attention, but they are only possible because of the high standard attained in other ways.

Thinking it over afterwards I was struck by the progress made since the War. About eight years ago Dr. La Touche and I discussed the subject of pest and disease control and wrote an article for the MGA Bulletin, entitled: "Hygiene on the Mushroom Farm." At that time DDT, BHC and similar chlorinated insecticides were quite new to mushroom growing, the parathion-malathion group had not even been tried experimentally, and we had not started thinking in terms of selective fungicides. Formalin was used on parasitic diseases on the beds but of course could not be used for all-over treatment as zineb is now. We had not even started to worry about eelworms, and their depradations were believed to be due to a fungus disease. Then it would have been fruitless to talk of specific control of diseases, now a scientist who is also a practical grower has pointed the way.

OXFORD GROWERS AND STAFFS TO CONFER

The Oxfordshire Agricultural Executive Committee National Advisory Service announce that the second annual conference for mushroom growers and their staffs will take place at the Oxfordshire Agricultural Executive Committee's offices, New Marston, Oxford, at 7 p.m., on Friday, 18th November. Major R. G. Shepley-Shepley (Longwood & Culham Nurseries Ltd.) will preside and a talk, "Efficiency in Mushroom Growing To-day," will be given by Mr. J. Stewart-Wood (Aylesbury Mushrooms Ltd.), former Chairman of the Mushroom Growers' Association. His talk will be illustrated by film slides and will be followed by a discussion. All mushroom growers and members of their staffs are welcome.

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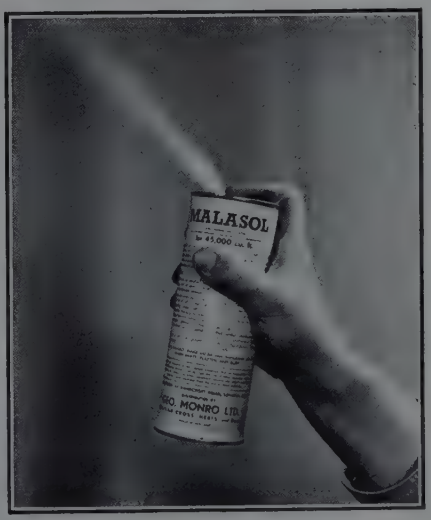

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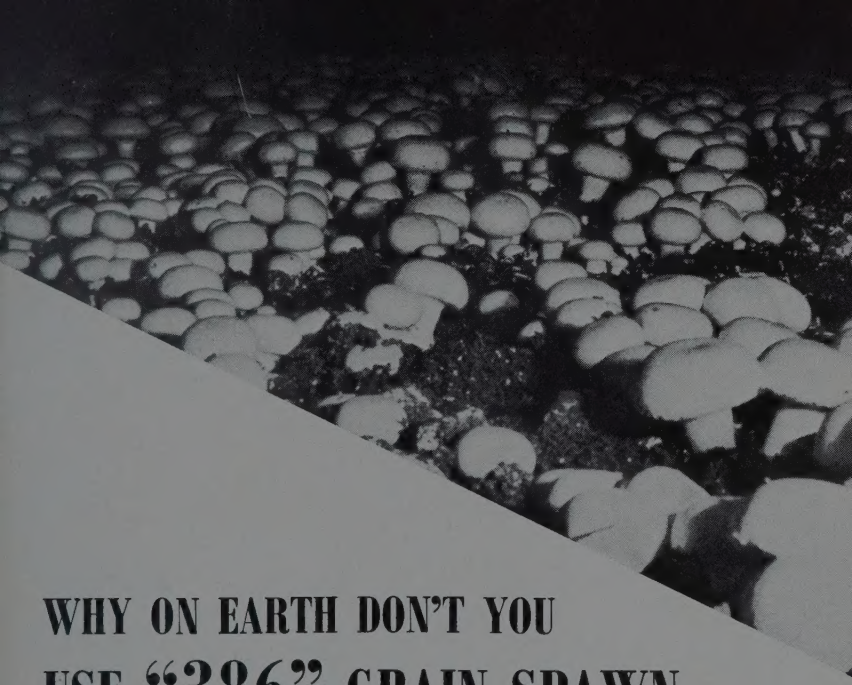

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